

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 141840***141840***

Page 2

Wednesday, February 17, 2016 1:39:44 PM

Item ID: DSI 9731-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: GHL Upgrade

Start Date: 2/17/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 2/26/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

0.00

130

Packaging

Packaging

Memo

0.00

Identify and pack for shipping as per PPP DSI9731-011

Location: **FG124****3****DAS
28
9-89****MAR 07 2016**

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.01

MS**MAR 07 2016**

Quality Control

MS MAR 07 2016

DQA: _____ Date: _____



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Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐ _____			

Picklist Print

Page 1

Wednesday, February 17, 2016 1:39:49 PM

Work Order ID: 141840

141840

Parent Item: DSI 9731-011

DSI 9731-011

Parent Item Name: GHL Upgrade

Start Date: 2/17/2016

Required Date: 2/26/2016

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 16.02.05 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D5300-1 *D5300-1* GHL Bushing		Manufactured	No				Each	0.0000	2	126			DAS 6 9-89
D5301-1 *D5301-1* GHL Plug		Manufactured	No				Each	0.0000	2	124			DAS 6 9-89
AN6C52A *AN6C52A* BOLT		Purchased	No				Each	0.0000	2	126			DAS 6 9-89
MS21043-6 *MS21043-6* NUT		Purchased	No				Each	51.0000	2	126			DAS 6 9-89

Location

Loc Qty

Loc Code

FG	20	
103693	20	
FP001	31	
131618	2	
m130325	2	
m133733	2	
m133992	25	

MAR 07 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐							
Misidentified ☐	☐	Past Due ☐	OTHER : ☐						

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D117-762 REV. D AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D117-762 REV. 3

REF FAA STC: SR01853SE

REF: TC LETTER OF ACCEPTANCE RDIMS-4374899

REF EASA STC: EASA.10017063

1.0 PURPOSE

The purpose of this Dart Service Instruction (DSI) is to replace the ground handling lugs (D3864-1 Bushings, AN6C51A Bolts and MS21043-6 Nuts) on the D145-762-XXX Skid tubes with a structurally superior lug design. This service instruction only affects D145-762-043/-013/-113 Skid tubes at change 004 or earlier and D145-762-045/-015/-115 Skid tubes at change 001. It is highly recommended to install DSI 9731-011 GHL Upgrade Kit in order to prevent early structural failure of the D145-762-XXX Skid tubes. Each DSI 9731-011 GHL Upgrade Kit provides the necessary parts and hardware for installation on one skid tube.

2.0 INSTALLATION

- 2.1 Remove (qty 4) D3864-1 Bushings per Skid tube by removing (qty 2) AN6C51A Bolts and (qty 2) MS21043-6 Nuts
- 2.2 Loosely install (qty 2) D5300-1 GHL Bushing & (qty 2) D5301-1 GHL Plug wet with Proseal 890 or MIL-S-8802 Class B2 Sealant in location shown in Figure 1.
- 2.3 Install AN6C52A Bolts and (qty 2) MS21043-6 Nuts in accordance with Figure 1. Clean up squeezed out Proseal and apply fillet seal around D5300-1 & D5301-1.
- 2.4 Torque AN6C52A Bolts 160 - 190 In-lbs (18.1 - 21.5 N-m).

3.0 PARTS LIST

QTY -011	PART NUMBER	DESCRIPTION
X	DSI 9731-011	GHL UPGRADE KIT
2	D5300-1	GHL BUSHING
2	D5301-1	GHL PLUG
2	AN6C52A	BOLT
2	MS21043-6	NUT

4.0 WEIGHT AND BALANCE

There is negligible weight and balance change associated with this modification.

A	NEW ISSUE	AP	15.11.02
REV.	DESCRIPTION	BY	DATE
DESIGN	AP	DART AEROSPACE, LTD EUGENE, OR	
DRAWN	AP		
CHECKED	<i>DB</i>	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9731	SHEET 1 OF 2
APPROVED	<i>CH</i>	TITLE	SCALE
DE APPR.	<i>CH</i>	GHL UPGRADE KIT	NTS
DATE	15.11.02	COPYRIGHT ©2015 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE, LTD.	

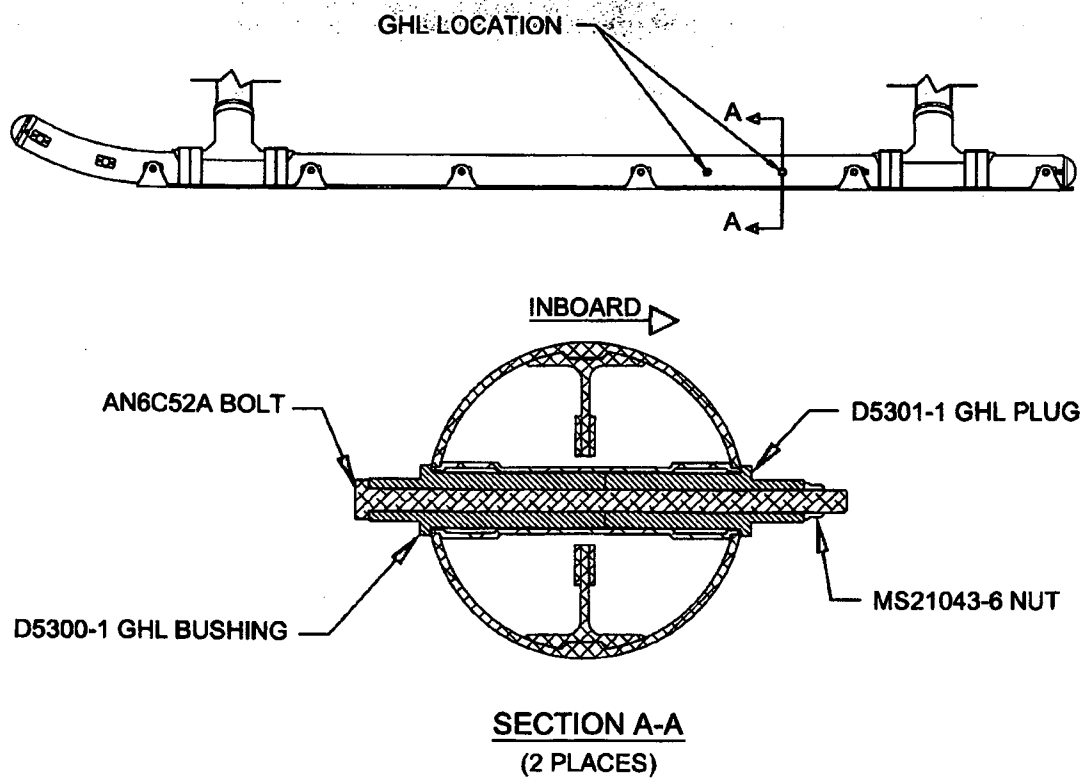


FIGURE 1 - GHL UPGRADE INSTALLATION

DESIGN	AP	DART AEROSPACE, LTD EUGENE, OR	
DRAWN	AP		
CHECKED	ASS	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9731	SHEET 2 OF 2
APPROVED	CP	TITLE	SCALE
DE APPR.		GHL UPGRADE KIT	NTS
DATE	15.09.15	COPYRIGHT © 2016 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE, LTD.	

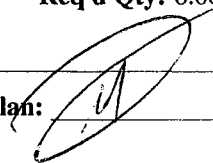
Work Order ID 141840

Wednesday, February 17, 2016 1:39:44 PM

141840

Page 1

Item ID: DSI 9731-011 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: GHL Upgrade
 Start Date: 2/17/2016 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 2/26/2016 Req'd Qty: 6.00 ***6*** Customer:
 Reference: 3/25

Approvals: Process Plan:  Date: 16-2-17 Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9731	A								
100	Document Control	0.00	DAS	6					
100	DOCUMENT CONTROL		9-89						
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP DSI9731-011 CHG001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.00							
Quality Control									

MCS

MAR 07 2016

3

3

MAR 04 2016

DAS
6
9-89

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D117-762 REV. D AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D117-762 REV. 3

REF FAA STC: SR01853SE
REF: TC LETTER OF ACCEPTANCE RDIMS-4374899
REF EASA STC: EASA.10017063

DAS
28
9-89

REFERENCE ONLY

1.0 PURPOSE

The purpose of this Dart Service Instruction (DSI) is to replace the ground handling lugs (D3864-1 Bushings, AN6C51A Bolts and MS21043-6 Nuts) on the D145-762-XXX Skid tubes with a structurally superior lug design. This service instruction only affects D145-762-043/-013/-113 Skid tubes at change 004 or earlier and D145-762-045/-015/-115 Skid tubes at change 001. It is highly recommended to install DSI 9731-011 GHL Upgrade Kit in order to prevent early structural failure of the D145-762-XXX Skid tubes. Each DSI 9731-011 GHL Upgrade Kit provides the necessary parts and hardware for installation on one skid tube.

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2	MS21043-6	NUT

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DRAWN	AP	EUGENE, OR	
CHECKED	DB	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9731	SHEET 1 OF 2
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	GHL UPGRADE KIT	NTS
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